



SARA Application Server 3.4.1

Release Notes and Installation Instructions

Please Read

Important

Please read this entire guide. If this guide provides installation or operation instructions, give particular attention to all safety statements included in this guide.

Notices

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About This Guide

These release notes and installation instructions provide information and procedures for upgrading a Cisco Digital Broadband Delivery System (DBDS) to Cisco Resident Application (SARA) Application Server 3.4.1.

Who Should Read This Publication?

Cisco engineers or system operators who are responsible for installing the SARA Server software onto a Digital Network Control System (DNCS) should read this publication.

Which Sites Are Affected?

These release notes and installation instructions affect sites that support the Cisco Resident Application (SARA).

How Long Does it Take to Install?

Completely installing the SARA Server 3.4.1 software may take approximately 2 hours. This time estimate includes taking down the system and bringing it back up.

About This Guide

1

Introducing SARA Server 3.4.1

Introduction

This chapter describes the features and enhancements SARA Server 3.4.1 provides, as well as performance improvements over the previous release of SARA Server software. Many of these changes were implemented at the request of our customers. This chapter also provides the requirements for upgrading the SARA Server with SARA Server 3.4.1. Review this chapter to learn more about these important changes and requirements.

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Why Choose SARA Server 3.4.1?

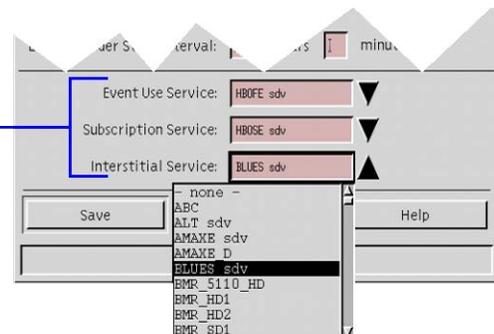
The release of SARA Server 3.4.1 provides cable service providers with new features and enhancements that have been added since SARA Server 3.1.5. Review this section to learn more about these improvements.

SARA Server 3.4.1 Supports Switched Digital Video

This release supports the use of Switched Digital Video (SDV), an optional network configuration that is available with SR 2.7/3.7 or SR 4.2 and later releases. As a result of this enhancement, the following selections are available on the DNCS Administrative Console when a network is configured for the SDV option.

Important! SDV is an optional network configuration that requires specific hardware and software components. For additional information on SDV, including hardware and software requirements, refer to the *Switched Digital Video Architecture Guide*.

When setting up a pay-per-view (PPV) service from the **Set Up PPV Service** window, operators can select an SDV service from the **Event Use Service**, **Subscription Service**, and **Interstitial Service** drop-down lists.



Short Description	Service Name	Service ID	URL Tag
HBO2E	HBO2E_D	17	watchsdv
HBO3	HBO3	81	watchsdv
HBO4	HBO4	82	watchsdv
HBOE	HBOE_HD sdv	107	watchsdv
HBOE	HBOE sdv	141	watchsdv
HBOFE	HBOFE sdv	18	watchsdv
MAXE	MAXE sdv	20	watchsdv
MCS0	MCS0 sdv	155	watchsdv
MOMXE	MOMXE sdv	215	watchsdv
PPV	PPV sdv	56	watchsdv
		120	watchsdv

From the **SAM Service List**, operators can use the URL tag **watchsdv** to identify SDV services.

DVD Auto-Play and Title Block Settings Configurable at the Headend

This release supports the ability to configure DVD Auto-Play and Title Block settings from the headend. Previously, these settings were configurable only at the set-top. As a result of this enhancement, the following selections are now available on the DNCS Administrative Console:

- **Enable DVD Auto-Play** is available in the Base Application tab on both the Set Up Addressable DHCT Configuration and Set Up Staging Defaults windows. When this feature is enabled, set-tops that have built-in Digital Video Disc (DVD) players automatically start playing a DVD when one is inserted in the DVD drive. When this feature is disabled, a DVD that has been inserted into the drive does not play until the subscriber selects Play. Set-tops that do not have built-in DVD players ignore this setting. The default setting for this feature is Disabled.

Important! To support this feature, DVD 1.0 or a later version of DVD code must be installed on DVDs.

Note: For instructions on configuring this setting from the DNCS, refer to *Configuring Your DBDS to Support DVR and DVD*.

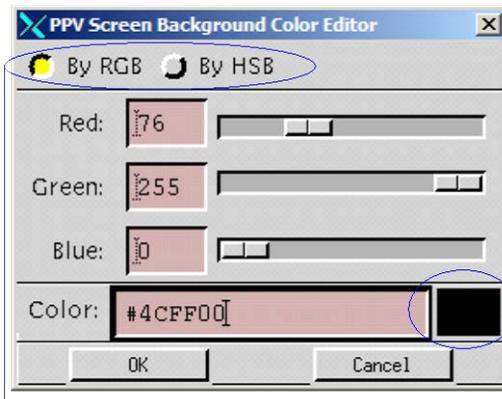
- **Block Titles of Blocked Programs** is available in the IPG tab on both the Set Up Staging Defaults and Set Up Addressable DHCT Configuration windows. When this feature is enabled, the SARA client prevents the titles of programs that have been blocked by the Parental Control feature from showing in the IPG. Instead, "Title Blocked" displays for the program title. For Digital Video Recorders (DVRs) and DVRs with built-in DVD players, the SARA client prevents the titles of any recordings that have been blocked by the Parental Control feature from showing in the Recorded List, Scheduled Recordings, and Recorded Program Options screens. Instead, "Title Blocked" displays for the title of the recording. The default setting for this feature is disabled; when disabled set-tops show the titles of programs that have been blocked by the Parental Control feature.

Important! To support these features, the following versions of SARA client must be installed on set-tops:

- DVR 1.6 and later
- SARA 1.60 and later
- **Note:** For instructions on configuring this setting from the DNCS, refer to *Enhancing Your Subscribers' Experience: SARA Configurable Options* or *Configuring Your DBDS to Support DVR and DVD*.

Reduce Set-Top Memory by Changing the PPV Screen Background Usage

This release provides the ability to reduce set-top memory by changing the look of the PPV screen background from a graphical background (the default option) to a solid-colored background. As a result of this enhancement, the PPV Screen Background option is now available in the IPPV tab on the Set Up Global DHCT Configuration window. Selecting this option displays the PPV Screen Background Color Editor window, similar to the following example.



When the PPV Screen Background Color Editor window is initially opened, black is shown in the Color field even though the editor may be configured for another color.

To display the proper color, click either of the options **By RGB** or **By HSB** to refresh the window and force the correct color to display in the Color field. If needed, click **By RGB** or **By HSB** again to enable the setting you prefer.

Note: For instructions on using the PPV Screen Background feature, refer to *Enhancing Your Subscribers' Experience: SARA Configurable Options*.

Important! To support these features, the following versions of SARA client must be installed on set-tops:

- SARA 1.60 and later
- DVR 1.5.3 and later

Control IPG Memory Usage at the Site or Hub Level

This release provides the ability to adjust how the IPG utilizes memory. As a result of this enhancement, Memory Usage options are now available on the following windows of the DNCS Administrative Console:

- Set Up Global DHCT Configuration window (IPG tab)
- Select Hub-Specific Items window (IPG tab)

Note: For instructions on using the Memory Usage feature, refer to *SARA Application Server 3.4.1 User's Guide*.

Important! To support these features, the following versions of SARA client must be installed on set-tops:

- SARA 1.60
- DVR 1.5.3

What Are the Site Requirements?

This section lists the prerequisites for installing SARA Server 3.4.1 and the software that is compatible with SARA Server 3.4.1.

For more information about SARA Server 3.4.1, please contact Cisco Services.

Prerequisites

To install SARA Server 3.4.1, you must have the **SARA Server 3.4.1 CD**.

Important! In addition, if your system uses applications from vendors other than Cisco, you should contact each vendor to determine whether you need to stop the application prior to installing SARA Server 3.4.1.

System Release Compatibility

The following system releases were tested and released with SARA Server 3.4.1:

- System Release (SR) 2.7 or later
- CV SR 3.4 and later
- SR 3.7 and later
- SR 4.2 and later

Compatible Application Platform Releases

The following table provides a compatibility matrix of application platform software verified with the individual system releases. A check mark in a column indicates compatibility with the specified release.

Note: Only released application platform releases are shown. If you have a question about current testing status of application releases, contact Cisco Services.

SARA	PowerTV® OS	SR 2.7	SR 3.7	CV SR 3.4*	SR 4.2
1.42	3.3.3	✓	✓	✓	✓
1.43	3.3.4	✓	✓	✓	✓
1.44	3.7	✓	✓	✓	✓
1.50	3.4	✓	✓	✓	✓
1.52	HDE 1.0	✓	✓	✓	✓
1.54	3.10	✓	✓	✓	✓
1.55	HGE 1.9	✓	✓	✓	✓
1.55	ISE 1.9	✓	✓	✓	✓
1.57	HDE 1.4	✓	✓	✓	✓
DVR 1.2	HSE 1.0	✓	✓	✓	✓

*Install CV SR 3.4 only on systems using NDS conditional access.

What's Fixed?

Introduction

This section provides a description of the CRs implemented in SARA Server 3.4.1.

Implemented CRs

CR 56088: IPG Displays Unknown Ratings Consistent with Established Practice

Starting with SARA Server 3.1.5, when the SARA server sent ratings strings to the versions of SARA client that supported the use of rating strings, the SARA client displayed "Unknown" for any programs with unknown ratings. Prior practice, which had been established when ratings values were hard-coded in the SARA client, was to display nothing for unknown ratings. **CR 56088** corrects this issue so that unknown ratings are displayed according to the practice established earlier and the IPG shows nothing for any ratings that are unknown.

CR 56964: Able to Delete PPV Service with no Package Assignments

Earlier releases of SARA server software would not allow a pay-per-view (PPV) service to be deleted if its package had also been deleted. **CR 56964** corrects this issue so that operators can now delete PPV services that have no package assignments.

CR 57241: SARA Server Checks for Logging of Database and Onconfig Values

Installing earlier releases of SARA server software required operators to manually verify the correct value for the TAPEDEV parameter and verify the correct log type prior to upgrading. Failing to perform these verifications could cause the SARA server upgrade to fail. **CR 57241** corrects this issue so that the SARA Server checks for logging of the database and onconfig values before continuing the upgrade.

CR 58956: Set Up VCS Window Supports the Use of Hi-Res Logos

The Set Up VCS window on the DNCS Administrative Console did not allow users to enter and save a Logo Index greater than 9999. As a result, operators were unable to use high-resolution (hi-res) logos for virtual channels because the numbering system for these logos begins at 10,000. **CR 58956** corrects this issue so that operators can save a Logo Index greater than 9999 in the Set Up VCS window.

Note: To support the use of hi-res logos, DVR 1.5, HD 1.6.0, or Dual CAK 5.2 must be installed on the SARA client.

CR 60892: Staging and Addressable DHCT Configuration Windows Properly Handle NR-Adult Program Blocking

The Block Programs Rated list included an invalid "X" between the NC-17 and NR-Adult ratings. (The X rating should not have appeared in the list.) The inclusion of this invalid rating caused the enumerated value sent to the SARA Client to be off by one for the NR-Adult rating. As a result, NR-Adult content was not blocked when it was selected in the Block Programs Rated list. **CR 60892** corrects this issue so that NR-Adult content is blocked when it is selected in the Block Programs Rated list.

Known Issues

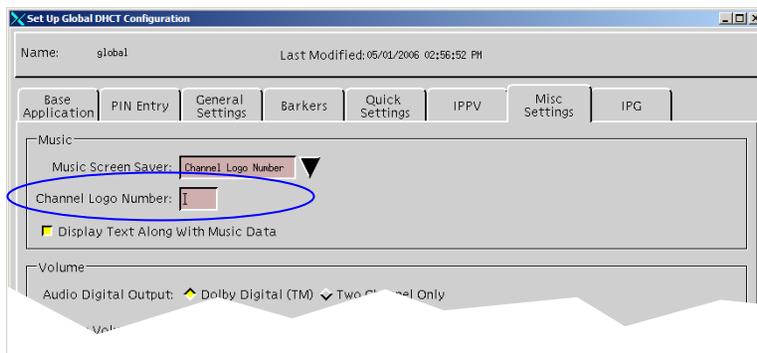
CR 59188: Error Message Appears When Changing Parameters of Event Whose Title Was Recently Changed

In the rare event that users change the parameters of an impulse pay-per-view (IPPV) event whose English Event Title was changed recently, the system displays an "Invalid Pay Per View" error in the Status area of the Set Up PPV Event window and event changes are not saved.

Workaround: Stopping and restarting the ppvServer process and then changing the parameters causes the changes to be saved.

CR 64144: No Number Is Shown in Channel Logo Number Field

When the Channel Logo Number option is used for the Music Screen Saver feature, the number entered in the Channel Logo Number field does not appear in the field after the number has been saved.



2

Preparing to Install SARA Server 3.4.1

Before installing SARA Server software, there are several tasks you must complete to ensure a successful installation. This chapter provides instructions on how to complete these tasks. It also provides recommendations and prerequisites that are essential to a successful installation.

In This Chapter

- Information You Should Know..... 12
- Pre-Installation System Checks..... 13
- Stop System Components..... 21

Information You Should Know

This section provides information you need to know before installing SARA Server software. Review the information in this section to ensure a successful installation.

What Skills and Expertise Are Required?

System operators or engineers who upgrade the application server to SARA Server 3.4.1 need advanced knowledge of the UNIX vi editor. To install SARA Server 3.4.1, you may need to use the UNIX vi editor to modify the parameters of some files. The UNIX vi editor is not intuitive. The instructions provided in this document are no substitute for an advanced working knowledge of vi.

When Is the Best Time to Upgrade to SARA Server 3.4.1?

The optimum time to upgrade your system is when you are least likely to intrude on subscribers' purchasing opportunities and least likely to impact your revenue-generating opportunities.

Traditionally, upgrades have been done during the night between 11:00 p.m. and 6:00 a.m. However, systems can be upgraded anytime during the day or night. You know your system and the habits of your subscribers better than anyone else. If you determine that there is a lot of xOD, VOD, or PPV revenue-generating activity on your system during the nighttime hours, you may opt to upgrade your system sometime during the day. For example, you may determine that there is little interactivity or few revenue-generating opportunities occurring in the early morning hours. This may be the best time to upgrade your system. Your subscriber base can continue to watch digital broadcasts (as long as the DHCT is not rebooted) and analog TV programs, without interruption, while the system is being upgraded.

Pre-Installation System Checks

This section provides procedures for the following system checks to be completed before you begin installing SARA Server software. The following list summarizes these checks. The remainder of this chapter provides procedures for tasks listed here.

- 1 Identify and locate the versions of SAIapsrv and SAItools currently installed so that you have them readily available. Having these items at hand is helpful in the unlikely event that you experience a problem installing SARA Server 3.4.1 and need to restore SARA Server software to the version that is currently installed.
- 2 Run the Doctor Report and correct any problems it may indicate.
- 3 Verify that the TAPPEDEV and LTAPPEDEV parameters are set correctly in the Informix Configuration file onconfig. If these parameters are set incorrectly, you may encounter difficulties during the installation.
- 4 Verify that your DBDS is stable.
- 5 Suspend the billing system and, if necessary, third-party (non-Cisco) applications.
- 6 Find out when the IPG collector will run so that you can ensure IPG data is correctly updated after SARA Server software is completely installed.

Identify and Locate the Versions of SAIapsrv and SAItools Currently Installed

Follow this procedure to identify the current versions of SAIapsrv and SAItools packages and locate them so they are readily available in the unlikely event you experience a problem installing SARA Server 3.4.1. Should you experience a problem and need to restore the version of SARA Server software currently installed on your system, you will need to reinstall SAIapsrv and SAItools packages.

Note: Refer to *Roll Back SARA Server 3.4.1* (on page 50) for instructions on reinstalling these software packages.

- 1 In an xterm window on the SARA Server type **pkginfo -l SAIapsrv** and press **Enter**. The current SARA Server version displays.
- 2 Write down the current SARA Server version here: _____
- 3 In the same xterm window on the SARA Server type **pkginfo -l SAItools** and press **Enter**. The current SAItools version displays.
- 4 Write down the tools version here: _____
- 5 Locate the CD(s) keep them on hand so that the CD(s) are readily available if you should need to roll back.

Important! If you cannot find these CDs, back up the SARA Server before beginning this procedure. For assistance backing up the SARA Server, refer to the backup and restore document for your system release.

- 6 Go to *Run the Doctor Report* (on page 14).

Run the Doctor Report

Before you upgrade the SARA Server to SARA Server 3.4.1, run the Doctor Report by following these instructions.

Introduction

The Doctor Report provides key system configuration data.

How Long Does It Take?

On a typical system, the Doctor Report takes about 10 minutes to run.

Running the Doctor Report

Follow the procedures in the DNCS Utilities Installation and Operation Guide to run the Doctor Report.

Analyzing the Doctor Report

Refer to the DNCS Utilities Installation and Operation Guide for help in interpreting the data generated by the Doctor Report. If you need help resolving any issues reported by the Doctor Report, call Cisco Services.

What's Next?

After you have run and analyzed the Doctor Report, and have corrected any problems it may indicate, go to *Verify Key Parameters in the Informix Configuration File* (on page 14).

Important! Do not proceed with the other procedures necessary to install SARA Server 3.4.1 until you have run and analyzed the Doctor Report, and you have corrected any problems it may indicate.

Verify Key Parameters in the Informix Configuration File

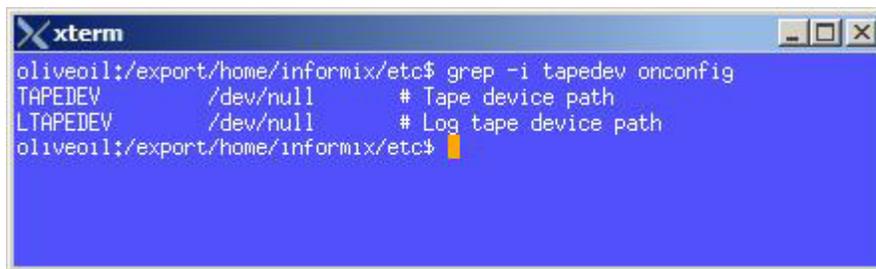
Before you upgrade the SARA Server to SARA Server 3.4.1, verify that the TAPEDEV and LTAPEDEV parameters are set correctly in the Informix Configuration file onconfig. If these parameters are set incorrectly, you may encounter difficulties during the installation.

How Long Does It Take?

On a typical system, it takes about 1 minute to determine the current settings of the key parameters TAPEDEV and LTAPEDEV. It takes about 5 minutes to change the settings.

Verifying TAPEDEV and LTAPEDEV Parameters

- 1 On the DNCS, open an xterm window.
- 2 Type **cd /export/home/informix/etc** and press **Enter**. The system makes /export/home/Informix/etc the working directory.
- 3 Type **grep -i tapedev onconfig** and press **Enter**. The system searches the onconfig file and displays lines that contain "tapedev," similar to the example shown here.



```

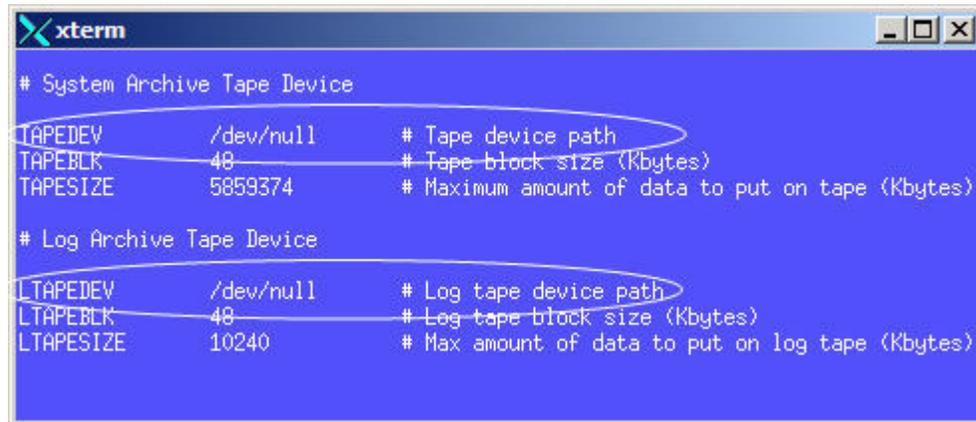
oliveoil:/export/home/informix/etc$ grep -i tapedev onconfig
TAPEDEV      /dev/null      # Tape device path
LTAPEDEV     /dev/null      # Log tape device path
oliveoil:/export/home/informix/etc$

```

- 4 Did the system display **/dev/null** as the tape device path and log tape device path?
 - If **yes**, the TAPEDEV and LTAPEDEV parameters are set correctly. You have successfully completed this procedure.
 - If **no**, type **cp onconfig onconfig.DATE** and press **Enter**. The system makes a copy of the onconfig file and names the copy onconfig.DATE.

Note: In this command, DATE represents today's date in DDMMYY format. For example, if today is March 15, 2005, you would type **cp onconfig onconfig.031505**.
- 5 Type **vi onconfig** and press **Enter**. The onconfig file opens for editing using the UNIX vi text editor.

- 6 Edit the TAPE DEV and LTAPEDEV parameters so that they use **/dev/null** for both the tape device path and log tape device path, as shown in the following example.



```
xterm
# System Archive Tape Device
TAPEDEV      /dev/null      # Tape device path
TAPEBLK      48            # Tape block size (Kbytes)
TAPESIZE     5859374     # Maximum amount of data to put on tape (Kbytes)

# Log Archive Tape Device
LTAPEDEV     /dev/null     # Log tape device path
LTAPEBLK     48            # Log tape block size (Kbytes)
LTAPESIZE    10240       # Max amount of data to put on log tape (Kbytes)
```

- 7 Save the file and close the vi text editor. You have successfully completed this procedure.
Note: Changes to the onconfig file are effective as soon as you save the file. It is not necessary to restart system components for these changes to take effect.
- 8 Type **exit** to close the xterm window.
- 9 Go to *Verify DBDS Stability* (on page 16).

Verify DBDS Stability

Before you upgrade the SARA Server to SARA Server 3.4.1, use this procedure on one or more test DHCTs to verify that your DBDS is stable. Your DBDS must be stable before you can upgrade to SARA Server 3.4.1.

Preconditions for Verifying DBDS Stability

Before you can verify DBDS stability, make sure that your test DHCTs meet the following conditions:

- Test DHCTs must be authorized for all third-party applications.
- Test DHCTs must not be authorized to view a pay-per-view (PPV) event without specifically buying the event.
- Test DHCTs must have a working return path and be capable of booting into two-way mode.

Verifying DBDS Stability

After you have ensured that your test DHCTs meet the qualifications listed above, follow these steps to verify that your DBDS is stable.

Important! If this procedure fails, do not continue with this procedure. Instead, contact Cisco Services.

- 1 Perform a slow-and-fast boot on a test DHCT as follows:
 - a Boot a DHCT.

Note: Do not press the power button.
 - b Access the Power On Self Test and Boot Status Diagnostic Screen on the DHCT and verify that all parameters, except UNcfg, display **Ready**.

Note: UNcfg displays **Broadcast**.
 - c Wait 5 minutes.
 - d Press the power button on the DHCT. The DHCT powers on.
 - e Access the Power On Self Test and Boot Status Diagnostic Screen on the DHCT.
 - f Do all of the parameters, including UNcfg, display **Ready**?
 - If **yes**, ping the DHCT.
 - If **no**, contact Cisco Services.
- 2 Did the DHCT receive the ping?
 - If **yes**, stage at least one new DHCT to the system operator's specifications.
 - If **no**, contact Cisco Services.

- 3 Did the newly staged DHCT successfully load the current client release software?
 - If **yes**, verify that the DHCT received at least 33 EMMs and its Entitlement Agent.
 - If **no**, contact Cisco Services.
- 4 Did the DHCT receive at least 33 EMMs and its Entitlement Agent?
 - If **yes**, go to step 7.
 - If **no**, contact Cisco Services.
- 5 Does the IPG display 7 days of valid and accurate data?
 - If **yes**, verify that the IPG supports multiple languages.
 - If **no**, contact Cisco Services.
- 6 Does the IPG support multiple languages?
 - If **yes**, verify that the PPV barkers appear correctly on the PPV channels.
 - If **no**, contact Cisco Services.
- 7 Do the PPV barkers appear on the PPV channels correctly?
 - If **yes**, verify that test DHCTs can purchase a VOD event.
 - If **no**, contact Cisco Services
- 8 Did the test DHCTs purchase a VOD event?
 - If **yes**, verify that third-party applications load properly.
 - If **no**, contact Cisco Services.
- 9 Do third-party applications load properly?
 - If **yes**, you have successfully verified the stability of the DBDS.
 - If **no**, contact Cisco Services.
- 10 Go to *Suspend the Billing System and Other Third-Party Applications* (on page 18).

Suspend the Billing System and Other Third-Party Applications

Before you upgrade the SARA Server to SARA Server 3.4.1, follow these instructions to stop the billing system and other third-party (non- Cisco) applications.

Suspending Billing and Other Third-Party Applications

Before installing SARA Server 3.4.1, suspend the billing system and any other third-party applications that communicate with the DNCS. Contact the billing vendor in order to suspend the billing interface. In addition, contact the providers of any third-party applications that your system supports. Follow their guidance in determining whether these third-party interfaces should be stopped as well.

What's Next?

After you have suspended the billing system and any other third-party applications, determine when the IPG collector will run. Go to *Find Out When the IPG Collector Will Run* (on page 19).

Find Out When the IPG Collector Will Run

Before installing SARA Server software, use the procedure in this section to obtain the following information so you can determine which action to take to ensure IPG data is correctly updated after the installation is complete:

- Find out whether an IPG collection is currently active.
- Find out when an IPG collection is scheduled.

Obtaining this information can help you decide which of the following actions to take to ensure IPG data is correctly updated after SARA Server software 3.4.1 is completely installed:

- Run the IPG collector manually after the installation is complete to ensure that IPG data is correctly updated.
- Allow the IPG collector to run automatically after the installation is complete to ensure that IPG data is correctly updated.

For example, if the IPG collector is scheduled to run at midnight and you are beginning to stop system components at 11:30 p.m., you will want to run the IPG collector manually after the installation is complete to prevent a missed or incomplete collection. On the other hand, if you are beginning to stop system components at 11:30 p.m. and the IPG collector is scheduled to run at 3:00 a.m., you will probably allow the collector to run automatically because you will have completed the installation before the start of the scheduled collection time.

Finding Out When the IPG Collector Will Run

Complete the following steps to determine when the IPG collector will run.

- 1 From the DNCS Administrative Console, click the **Server Applications** tab.
- 2 Click **IPG**. The IPG Server List window opens.
- 3 Double-click the icon (📁) for the **IPG server**. The IPG collectors display beneath the IPG server icon.
- 4 Select the icon (📁) for the **IPG collector**, and click **File** and choose **Open**. The Set Up IPG Collector window opens. The Set Up IPG Collector window opens.
- 5 Find the setting for the **Daily Collection Time** to determine when the collector is scheduled to run, or if a collection is currently running.

Note: Use this information to determine whether or not you should run the IPG collector manually or allow it to run automatically after the installation is complete. If a collection is in progress, allow it to finish running before proceeding to the next pre-installation task.

- 6 Do you have more than one IPG server (for example, an English and French server)?
 - If **yes**, repeat steps 3 to 5 for each additional IPG server. When you have finished, go to *Stop System Components* (on page 21).
 - If **no**, go to *Stop System Components* (on page 21).

Stop System Components

Before installing SARA Server software, use the procedures in this section to stop system components in the proper order. Failing to stop system components in the order described in this section may cause you to encounter difficulties during the installation.

Important! System components must be stopped prior to installing SARA Server software.

Stopping System Components

To stop system components, follow this process:

Note: Detailed instructions for each task shown here are provided later in this section.

- 1 If your system uses the Regional Control System (RCS) option, stop the Remote Network Control Server (RNCS) processes at each site in your RCS.
Note: The RCS feature is available with SR 2.5/SR 3.5 and later.
- 2 Stop the Spectrum Network Management Service (NMS).
- 3 Stop SARA Server cron jobs and processes.
- 4 Stop DNCS cron jobs and processes.
- 5 Ensure no active database sessions are on the DNCS.

Stopping RNCS Processes

If your system uses the RCS feature, use one of the following methods to stop RNCS processes at each remote site in your RCS:

- Use the **siteControl** command to stop RNCS processes at *each* site in your system, one site at a time. Go to *Stopping RNCS Processes at One Site* (on page 23).
- Use the **siteCmd** command to stop RNCS processes at *all* sites in your system. Go to *Stopping RNCS Processes at All Sites* (on page 22).

Note: If you are unsure whether or not the RCS feature is enabled, use the licenseAud utility to verify the status of this option. For assistance, go to *Determining Whether RCS Is Enabled* (on page 22).



CAUTION:

When RNCS processes are stopped, two-way communication also stops at this site. This site will not be able to offer any PPV, VOD, other on-demand services, or other third-party applications during this time. In addition, this site will provide only limited IPG functionality, and you will be unable to stage DHCTs or update modulator/demodulator code.

Determining Whether RCS Is Enabled

If you do not know whether or not the RCS option is enabled on your system, complete the following steps to find out.

- 1 Open an xterm window on the DNCS as the dncs user.
- 2 Type `cd /dvs/dncs/bin` and press **Enter**. The system makes `/dvs/dncs/bin` the working directory
- 3 Type `licenseAud` and press **Enter**. The main menu of the License Audit utility opens.
- 4 Type `1` and press **Enter**. The utility displays the license status for all licensable features, similar to the following example.

```

xterm
.....
* 1. Display all features' license status *
* 2. Display selected feature license status *
* 3. (Q)uit *
*.....*
Select option: 1

EAS FIPS Code Filtering          licensed
DOCSIS DHCT Support             licensed
Enhanced VOD Session Throughput licensed
VOD Session Encryption          licensed
Distributed DNCS                 not_licensed
Open Cable Applications Platform (OCAP) licensed

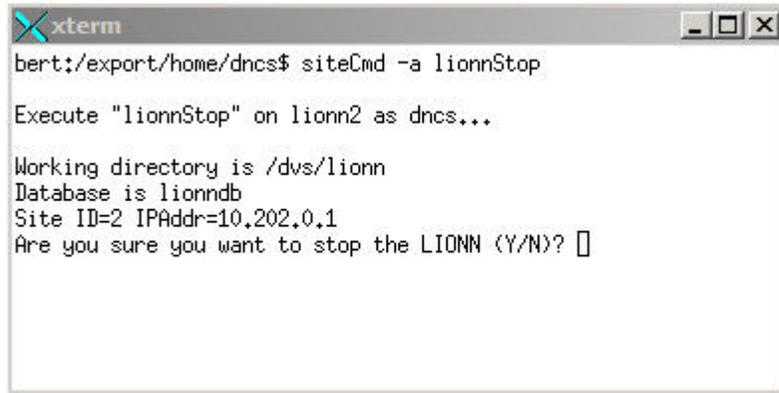
Hit Enter to continue.

```

- 5 Is the **Distributed DNCS** feature listed as **licensed**?
 - If **yes**, the RCS feature is enabled on your system.
 - If **no**, the RCS feature is disabled on your system.
- 6 Press **Enter** to continue.
- 7 Type `3` and press **Enter** to close the License Audit utility.
- 8 Type `exit` and press **Enter** to close the xterm window.
- 9 Is the RCS feature enabled on your system?
 - If **yes**, go to *Stopping RNCS Processes* (on page 21).
 - If **no**, go to *Stopping Spectrum NMS* (on page 25).

Stopping RNCS Processes at All Sites

- 1 Open an xterm window on the DNCS as the dncs user.
- 2 To stop RNCS processes at all sites in your system, type **siteCmd -a lionnStop** and press **Enter**.



```
xterm
bert:/export/home/dncs$ siteCmd -a lionnStop

Execute "lionnStop" on lionn2 as dncs...

Working directory is /dvs/lionn
Database is lionndb
Site ID=2 IPAddr=10.202.0.1
Are you sure you want to stop the LIONN (Y/N)? 
```

- 3 When the system prompts you to verify that you want to "stop the LIONN" (all RNCS processes at all sites), type **Y** (yes) and press **Enter** to confirm that you want to stop the processes on all sites in your system. The system informs you that it is stopping LIONN Applications (processes on all sites in your system), and displays the command prompt for the DNCS user.
- 4 Follow the on-screen instructions to exit the utility. Then go to *Stopping Spectrum NMS* (on page 25).

Stopping RNCS Processes at One Site

- 1 Open an xterm window on the DNCS as the dncs user.
- 2 To stop RNCS processes at each site in your system, one at a time, type **siteControl (host name of the RNCS)** and press **Enter**. For example if "houston" is the name of the RNCS host, you would type **siteControl houston**. A menu opens, similar to the following example, that allows you to stop the RNCS processes at this site.

```

siteControl: lionn-denver (from flame)
I
SNMP ExAgent V1.1 (c) 1997. Licensed Version.
-----
| Hostname: lionn-denver, UpTime: 78:03:47.00
| -> SysApp Agent: Main Menu
-----
[ 1 ] Startup / Shutdown All Element Groups
[ 2 ] Startup / Shutdown Single Element Group
-----
[ 3 ] Define / Update Element Group
[ 4 ] Define / Update Grouped Elements
[ 5 ] Update Agent Executive Parameter.
-----
[ L ] List Connection Parameters.
[ X ] Exit Menu Utility.
-----
Enter a menu option number, or 'X' to exit.
Enter Menu Option> █
  
```

- 3 Type **1** to select **Startup/Shutdown All Element Groups** and press **Enter**. The system prompts you to select the target state of the element groups, similar to the following example.

```

Set hc get St System
-----
Enter master target state for system, in the range 1-4.
Possible values are:
[ 1 ] stopped(1)
[ 2 ] running(2)
[ 3 ] paused(3)
[ 4 ] disabled(3)
Default value: running(2)
(Enter Number / X=Return To Menu)> █
  
```

- 4 Type **1** to select Stopped, and press **Enter**. A confirmation prompt appears.
- 5 Type **y** to select **yes**, and press **Enter**. The main menu displays.
- 6 Type **2** and press **Enter**. The system displays the status of each process.

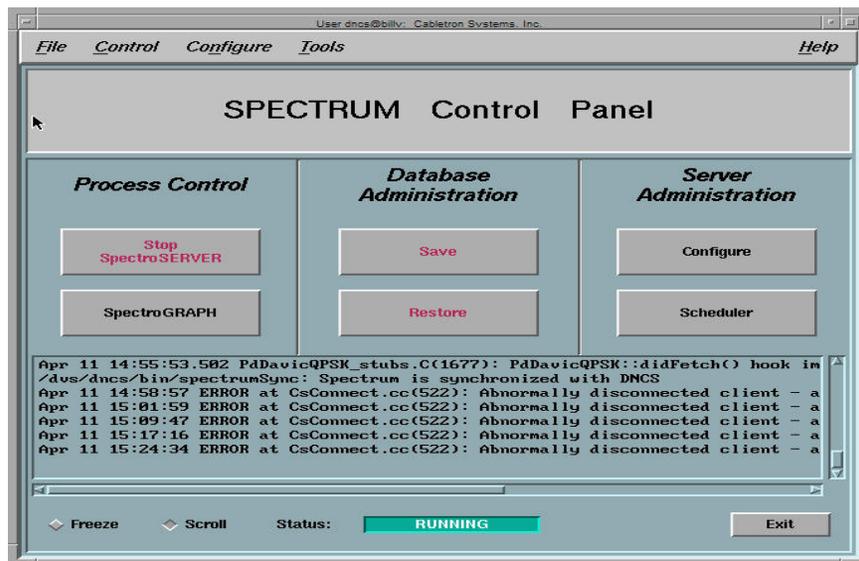
- 7 When all processes show a status of “stopped,” follow the on-screen instructions to exit the utility.
- 8 Have you stopped RNCS processes at all sites in your RCS?
 - If **yes**, type **x** and press **Enter** to exit the utility. Then go to *Stopping Spectrum NMS* (on page 25).
 - If **no**, repeat steps 2 to 7 to stop the processes on another RNCS at another site in your system.

Stopping Spectrum NMS

- 1 On the DNCS Administrative Console Status window, click **Control** in the NMS area. The Select Host Machine window opens, similar to the following example, with the Spectrum Control Panel in the background.



- 2 Click **OK** to accept the default. The Select Host Machine window closes and the Spectrum Control Panel window moves to the forefront and displays a Status of Running.

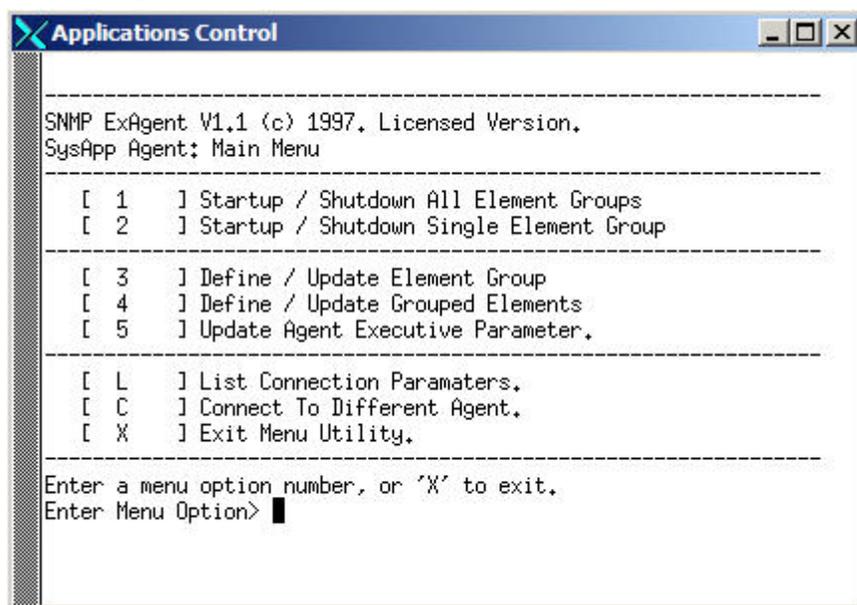


- 3 Click **Stop SpectroSERVER**. A confirmation window opens.

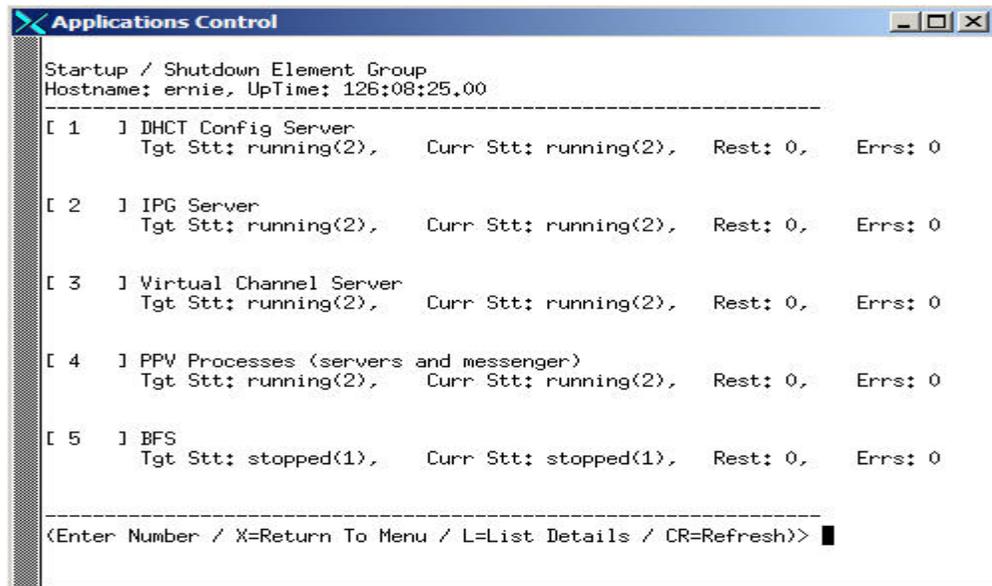
- 4 Click **OK**. The confirmation window closes and the system begins shutting down the Spectrum NMS. When finished, the Status on the Spectrum Control Panel window changes to Inactive.
- 5 Click **Exit**. A confirmation window opens.
- 6 Click **OK**. The confirmation and Spectrum Control Panel windows close.
- 7 Go to *Stopping SARA Server Processes* (on page 26).

Stopping SARA Server Processes

- 1 From the SARA server console, open an xterm window.
- 2 At the prompt, type **appControl** and press **Enter**. The Applications Control window opens, similar to the example shown here.



- 3 Type **2** to select Startup/Shutdown Single Element Group and press **Enter**. A list appears of all the SARA Server processes and shows their current working states (running or stopped).



```

Applications Control
-----
Startup / Shutdown Element Group
Hostname: ernie, UpTime: 126:08:25.00
-----
[ 1 ] ] DHCT Config Server
      Tgt Stt: running(2),   Curr Stt: running(2),   Rest: 0,   Errs: 0

[ 2 ] ] IPG Server
      Tgt Stt: running(2),   Curr Stt: running(2),   Rest: 0,   Errs: 0

[ 3 ] ] Virtual Channel Server
      Tgt Stt: running(2),   Curr Stt: running(2),   Rest: 0,   Errs: 0

[ 4 ] ] PPV Processes (servers and messenger)
      Tgt Stt: running(2),   Curr Stt: running(2),   Rest: 0,   Errs: 0

[ 5 ] ] BFS
      Tgt Stt: stopped(1),   Curr Stt: stopped(1),   Rest: 0,   Errs: 0

-----
<Enter Number / X=Return To Menu / L=List Details / CR=Refresh>> █

```

- 4 Click the middle mouse button and select **App Serv Stop**. The SARA Server begins shutting down all of its processes. This takes approximately 2 minutes to complete.
- 5 On the Applications Control window, press **Enter** to update the working states of the SARA Server processes.

Notes:

- Continue to press Enter every few seconds until all processes show Curr Stt: stopped(1).
 - You will not see a status message while the processes are shutting down.
- 6 When all processes show Curr Stt: stopped(1), you have successfully stopped SARA Server processes.
 - 7 Follow the on-screen instructions to close the Applications Control window.
 - 8 Close any windows that may be open on the SARA Server, except the xterm window.
 - 9 Close all remote connections to the SARA Server, and then go to *Stopping the cron Jobs on the SARA Server* (on page 27).

Stopping the cron Jobs on the SARA Server

- 1 Open an xterm window on the SARA server. A prompt appears.
- 2 Check if the cron jobs are already running. Type **ps -ef | grep cron** and then press Enter. If cron jobs are already running, the system should list **/usr/sbin/cron**. If **/usr/sbin/cron** is not listed, then cron jobs are not running.
- 3 Are the cron jobs already running?
 - If **yes**, go to step 15.
 - If **no**, go to step 11.
- 4 From a prompt on the SARA Server xterm window, type **su -** and press **Enter**. A password prompt appears.
- 5 Type the root user password and press **Enter**. A prompt for the root user appears.
- 6 Type **ps -ef | grep cron** and press **Enter**. The system lists the processes that are running and include the word cron.
- 7 Does the resulting list include **/usr/sbin/cron**?
 - If **yes**, type **/etc/rc2.d/S75cron stop** and press **Enter**. The system stops all cron jobs on the SARA server
 - If **no**, the cron jobs are already stopped on the SARA Server. You have successfully completed this procedure.
- 8 To confirm that all of the cron jobs have stopped, type **ps -ef | grep cron** and press **Enter**. The system should list only the grep process.
- 9 Is the grep process the only process listed?
 - If **yes**, go to *Stopping the DNCS Processes* (on page 28).
 - If **no**, call Cisco Services.

Stopping the DNCS Processes

- 1 Close all remote connections to the DNCS.
- 2 On the DNCS, click the middle mouse button and select **DNCS Stop**. The DNCS begins shutting down all of its processes. This takes approximately 2 minutes to complete.
- 3 Open an xterm window on the DNCS.
- 4 At the prompt, type **dncsControl** and press **Enter**. The DNCS Control window opens.
- 5 Type **2** to select **Startup/Shutdown Single Element Group** and press **Enter**. A list appears of all the DNCS processes and shows their current working states (running or stopped).
- 6 On the DNCS Control window, press **Enter** to update the working states of the DNCS processes. Continue to press **Enter** every few seconds until all processes show **Curr Stt: stopped(1)**.

Note: You will not see a status message while the processes are shutting down.
- 7 When all processes show **Curr Stt: stopped(1)**, follow the on-screen instructions to close the DNCS Control window.
- 8 Close any windows that may be open on the DNCS, except the xterm window.
- 9 Go to *Stopping the cron Jobs on the DNCS* (on page 29).

Stopping the cron Jobs on the DNCS

Note: A cron job is a program that runs automatically without specific user intervention.

- 1 Are you logged into the DNCS as root user?
 - If **yes**, go to step 5.
 - If **no**, go to step 2.
- 2 Open an xterm window on the DNCS.
- 3 At the prompt, type **su -** and press **Enter**. A password prompt appears.
- 4 Type the root user password and press **Enter**. A prompt for the root user appears.
- 5 From the root user prompt, type **ps -ef | grep cron** and press **Enter**. The system lists the processes that are running and include the word cron.
- 6 Does the resulting list include **/usr/sbin/cron**?
 - If **yes**, type **/etc/rc2.d/S75cron stop** and press **Enter**. The system stops all cron jobs on the DNCS.
 - If **no**, the cron jobs are already stopped on the DNCS. You have successfully completed this procedure.

- 7 Type **ps -ef | grep cron** again and press **Enter** to confirm that all of the cron jobs have stopped. The system should list only the **grep** process.
- 8 Is the **grep** process the only process that is listed?
 - If **yes**, go to *Ensuring No Active Database Sessions on the DNCS* (on page 30).
 - If **no**, call Cisco Services.

Ensuring No Active Database Sessions on the DNCS

Note: You should still be logged into the DNCS as root user.

- 1 Are you logged into the DNCS as root user?
 - If **yes**, go to step 5.
 - If **no**, go to step 2.
- 2 Open an xterm window on the DNCS.
- 3 At the prompt, type **su -** and press **Enter**. A password prompt appears.
- 4 Type the root user password and press **Enter**. A prompt for the root user appears.
- 5 From a root user prompt, type **. /dvs/dncls/bin/dnclsSetup** and press **Enter**. The system establishes the dncls user environment followed by a prompt.

Important! Be sure to type a period (.) followed by a space at the beginning of this command.
- 6 Type **showActiveSessions** and press **Enter**. A message appears.
- 7 Your next step depends on whether the message indicates active sessions exist.
 - If the message indicates that the **INFORMIXSERVER is idle**, there are no active database sessions on the DNCS.
 - If the message indicates that there are **active sessions**, type **killActiveSessions** and press **Enter**. The system removes all active sessions from the database.
- 8 Type **showActiveSessions** again and press **Enter** to confirm that there are no active sessions.
- 9 Did a message appear indicating that there are active sessions?
 - If **yes**, contact Cisco Services.
 - If **no**, there are no active database sessions on the DNCS.
- 10 Now that you have confirmed that there are no active database sessions on the DNCS, go to Chapter 3, *Installing SARA Server 3.4.1* (on page 31).

3

Installing SARA Server 3.4.1

Introduction

This chapter provides procedures for installing the SARA Server 3.4.1 software.

Important! Before completing any of the procedures in this chapter, make certain that you have first completed all of the procedures in *Preparing to Install SARA Server 3.4.1* (on page 11).

In This Chapter

- Install the SARA Server Software..... 32
- Verify SARA Server Versions 34
- Reboot the DNCS and the SARA Server 36
- Restart System Components 37
- Complete System Validation Tests..... 45

Install the SARA Server Software

Introduction

This section describes how to install SARA Server software onto the SARA Server.

Before You Begin

Before you install the SARA Server software, verify that you have the CDs for the previous versions of SARA Server code in case you need to roll back.

Installing the SARA Server Software

Note: It should take about 15 minutes to install the SARA Server software.

- 1 Open an xterm window on the SARA server. A prompt appears.
- 2 Check if the cron jobs are already running. Type **ps -ef | grep cron** and then press Enter. If cron jobs are already running, the system should list **/usr/sbin/cron**. If **/usr/sbin/cron** is not listed, then cron jobs are not running.
- 3 Are the cron jobs already running?
 - If **yes**, go to step 15.
 - If **no**, go to step 11.
- 4 From a prompt on the SARA Server xterm window, type **su -** and press **Enter**. A password prompt appears.
- 5 Type the root user password and press **Enter**. A prompt for the root user appears.
- 6 Place the CD containing **SARA Server software version 3.4.1** into the CD drive of the SARA Server. The system automatically mounts the CD to **/cdrom** within 30 seconds.
- 7 Type **df -n** and then press **Enter**. A list of the mounted and unmounted file systems appears.

Note: The presence of **/cdrom** in the output confirms that the system correctly mounted the CD.
- 8 Type **cd /cdrom/cdrom0** and then press **Enter**. The **/cdrom/cdrom0** directory becomes the working directory.
- 9 Type **/install_pkg** and then press **Enter**. The system prompts you to confirm that you want to proceed with the installation.

Important! Make certain that there are no spaces between the dot (**.**) and slash (**/**).
- 10 Type **y** (for yes) and press **Enter** to start the installation. The Install Configuration screen opens and lists the installation configuration settings.

- 11 Do the settings listed match those of your installation environment?
 - If **yes**, type **c** (to continue) and press **Enter** to start the installation.
 - If **no**, follow these instructions to change one or more settings:

Important! The Install Configuration settings are case-sensitive. For this reason, make certain that the option you enter exactly matches the option displayed. Otherwise, the system rejects your entry. For example, if the system lists “USA” as an option for INSTALLED_IN_COUNTRY, do not type “usa.”

 - a Type the number that corresponds to the setting you want to change, and press **Enter**. The system prompts you to select an option, and provides available options in parentheses. The default setting appears in brackets.

Example: To change the setting for INSTALLED_IN_COUNTRY, type 6 and press Enter.
 - b Type the option appropriate to your installation, and press **Enter**. The Installation Configuration settings change to show the option you just entered.

Example: To change the INSTALLED_IN_COUNTRY setting from the default [USA] to Canada, type Canada and press Enter.
 - c Repeat steps a and b to change another setting. After all settings are correct, type **c** (to continue) and then press **Enter** to start the installation.
- 12 When the installation is complete, the system displays a message stating that the installation was successful, lists the directory where installation messages were stored, and displays a root user prompt.

Notes:

 - The installation should take about 5 minutes.
 - The log file for the SARA Server software is in this directory on the SARA Server: /var/sadm/system/logs.
 - The log file for the SARA Server software is called **SAIapsrv_3.4.1.x_install.log**.
- 13 Did the system indicate that the installation was successful?
 - If **yes**, type **cd /** and press **Enter** to move to the root directory. Then continue with the next step in this procedure.
 - If **no**, contact Cisco Services for assistance.
- 14 Type **eject cdrom** and press **Enter**. The CD ejects.
- 15 Remove the CD from the CD drive and store it in a secure location.
- 16 Go to *Verify SARA Server Versions* (on page 34).

Verify SARA Server Versions

Introduction

After you install the required software for SARA Server 3.4.1, next ensure that the correct software version was installed on the SARA Server as described in this section.

To verify that the correct version was installed during the upgrade, use `pkginfo`, a Solaris software management tool. The `pkginfo` tool displays details about a software package, including the version number and status of the package.

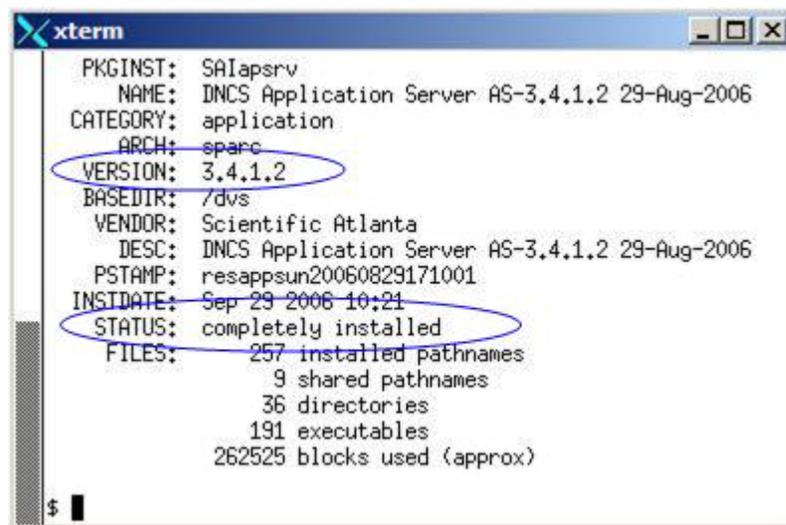
Important: If `pkginfo` indicates the status of the software is not completely installed, contact Cisco Services for assistance.

Verifying SARA Server Versions

After you verify the DNCS software versions, complete these steps to verify the software versions installed on the SARA Server during the upgrade.

- 1 On the SARA Server xterm window, type `pkginfo -l SAIpsrv` and press **Enter**. The system displays details about the SARA Server software package (SAIpsrv), similar to the following example. The software version number and status are circled in this example.

Note: The `-l` is a lowercase L.



```

xterm
PKGINST: SAIpsrv
NAME: DNCS Application Server AS-3.4.1.2 29-Aug-2006
CATEGORY: application
ARCH: sparc
VERSION: 3.4.1.2
BASEDIR: /dvs
VENDOR: Scientific Atlanta
DESC: DNCS Application Server AS-3.4.1.2 29-Aug-2006
PSTAMP: resappsun20060829171001
INSTDATE: Sep 29 2006 10:21
STATUS: completely installed
FILES: 257 installed pathnames
       9 shared pathnames
       36 directories
       191 executables
       262525 blocks used (approx)
$

```

2 Does the **VERSION** field show **3.4.1.X** and the **STATUS** field show **completely installed**?

- If **yes**, type **pkginfo -l SAIttools** and press **Enter**. The system displays details about the SARA Server Toolkit software package (SAIttools).
- If **no**, contact Cisco Services for assistance.

Note: Any number can appear for the build number (the fourth digit of the version number).

3 Does the **VERSION** field show **3.4.1.x** and the **STATUS** field show **completely installed**?

- If **yes**, you have verified that the correct software version was installed on the SARA Server.
- If **no**, contact Cisco Services for assistance.

Note: Any number can appear for the build number (the fourth digit of the version number).

4 Go to *Reboot the DNCS and the SARA Server* (on page 36).

Reboot the DNCS and the SARA Server

After you verify installed software component versions, follow these steps to reboot the DNCS and SARA Server.

- 1 From a root user prompt on the SARA Server, type **/usr/sbin/shutdown -y -g0 -i0** and press **Enter**. The SARA Server shuts down and an ok prompt appears.
- 2 At the root prompt on the DNCS, type **/usr/sbin/shutdown -y -g0 -i6** and press **Enter**. The DNCS reboots, and the CDE Login window appears.
- 3 Log on to the DNCS as **dncs** user.
- 4 At the ok prompt on the SARA Server, type **boot** and press **Enter**. The SARA Server reboots and the CDE Login window appears.
- 5 Log on to the SARA Server as **dncs** user.
- 6 Go to *Restart System Components* (on page 37).

Restart System Components

Introduction

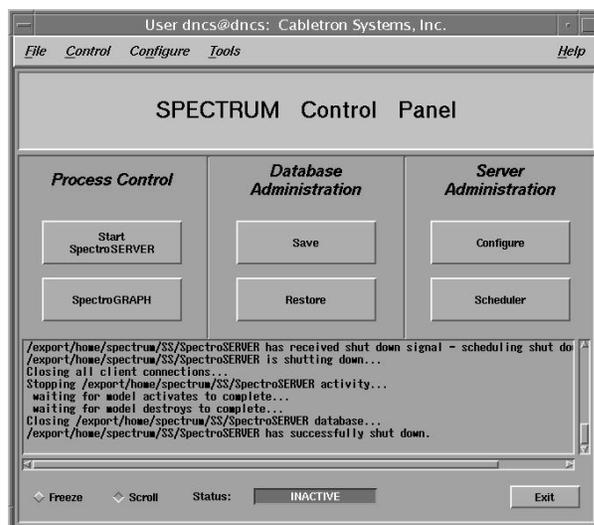
After you reboot the DNCS and the SARA Server, you must complete the procedures in this section to restart the following system components in the order listed:

- 1 Restart Spectrum NMS.
- 2 Restart DNCS processes.
- 3 Restart SARA Server processes.
- 4 Restart cron jobs, if necessary.
- 5 Restart the billing system and other Third Party applications.
- 6 If using the RCS feature, restart RNCS processes at each remote site.

Restarting Spectrum

Note: Skip this procedure if you are using DBDS Alarm Manager 1.0 instead of Spectrum.

- 1 On the DNCS, click the middle mouse button and select **Administrative Console**.
- 2 On the DNCS Administrative Console Status window, click **Control** in the NMS area. The Select Host Machine window opens with the Spectrum Control Panel in the background.
- 3 Click **OK**. The Select Host Machine window closes and the Spectrum Control Panel moves to the forefront.



- 4 Click **Start SpectroSERVER**. The system begins restarting the Spectrum NMS. When finished, the Status field at the bottom of the Spectrum Control Panel changes to Running.
- 5 Click **Exit**. A confirmation window opens
- 6 Click **OK**. The confirmation and Spectrum Control Panel windows close.
- 7 Go to *Restarting the DNCS* (on page 38).

Restarting the DNCS

- 1 On the DNCS, click the middle mouse button and select **Administrative Console**. The DNCS Administrative Console window opens, along with the DNCS Administrative Console Status window.
- 2 On the DNCS Administrative Console Status window, click the **Control** (or **Monitor**) button in the DNCS area. The DNCS Control (or Monitor) window opens with a list of all the DNCS processes and their working states. A red state indicates that a process is not running. At this point, all processes should show a red state.
- 3 Click the middle mouse button and select **DNCS Start**. On the DNCS Control window, all of the processes begin changing to a green state, which indicates that they are running.
Note: It may take several minutes before all processes show a green state.
- 4 Open an xterm window on the DNCS.
- 5 At the prompt, type **dncsControl** and press **Enter**. The DNCS Control window appears.
- 6 Type **2** to select **Startup/Shutdown Single Element Group** and press **Enter**. A list appears of all the DNCS processes and shows their current working states (running or stopped).
- 7 Press **Enter** to update the working states of the DNCS processes. Continue to press **Enter** every few seconds until all processes show **Curr Stt: running(2)**.
Note: You will not see a status message while the processes are starting up.
- 8 When all processes, except [17] GUI Servers, show **Curr Stt: running(2)**, follow the on-screen instructions to close the DNCS Control window.
Note: GUI Servers will always show **Curr Stt: stopped (1)**.
- 9 Close any windows that may be open on the DNCS, except the xterm and the DNCS Monitor windows.
- 10 Go to *Restarting the SARA Server* (on page 38).

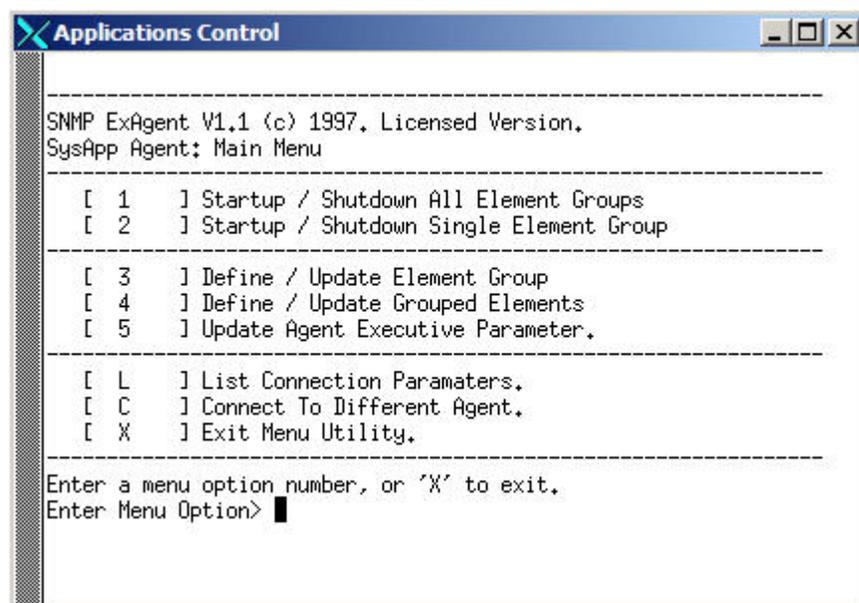
Restarting the SARA Server

The SARA Server processes may have restarted on their own. Follow these instructions to check if the SARA Server processes have started, and then to start them, if necessary.

If your site supports SARA, complete these steps to restart the SARA Server after you restart the cron jobs on the DNCS.

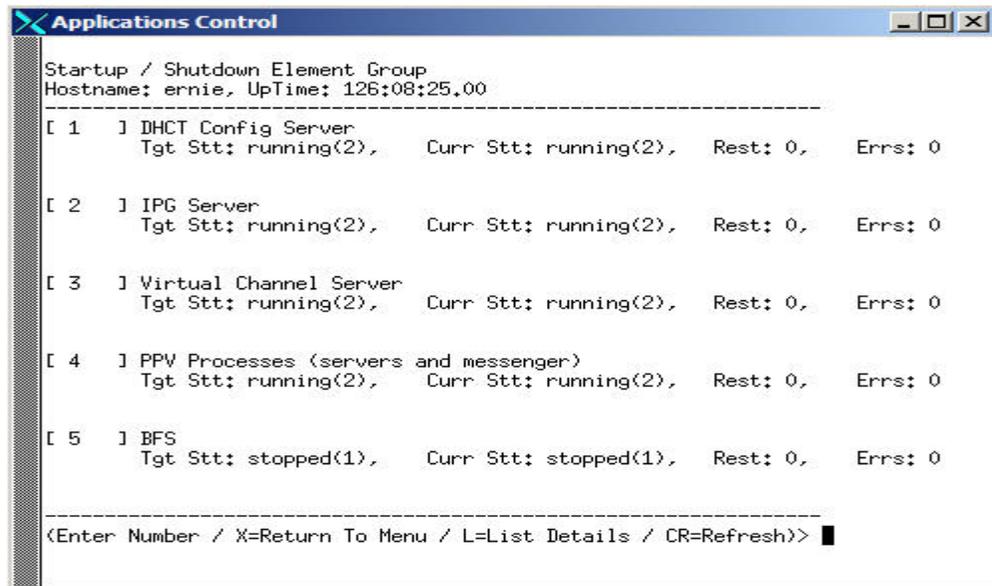
Note: The SARA Server may have restarted automatically. This procedure will help you determine whether or not it has before you try to restart it.

- 1 On the SARA Server xterm window, type **appControl** and press **Enter**. The Applications Control window opens, similar to the following example.



```
Applications Control
-----
SNMP ExAgent V1.1 (c) 1997. Licensed Version.
SysApp Agent: Main Menu
-----
[ 1 ] Startup / Shutdown All Element Groups
[ 2 ] Startup / Shutdown Single Element Group
-----
[ 3 ] Define / Update Element Group
[ 4 ] Define / Update Grouped Elements
[ 5 ] Update Agent Executive Parameter.
-----
[ L ] List Connection Paramaters.
[ C ] Connect To Different Agent.
[ X ] Exit Menu Utility.
-----
Enter a menu option number, or 'X' to exit.
Enter Menu Option> █
```

- Type **2** to select Startup/Shutdown Single Element Group and press **Enter**. A list of all the SARA Server processes appears and shows their current working states (running or stopped).



```

Applications Control
-----
Startup / Shutdown Element Group
Hostname: ernie, UpTime: 126:08:25.00
-----
[ 1 ] DHCT Config Server
      Tgt Stt: running(2),   Curr Stt: running(2),   Rest: 0,   Errs: 0

[ 2 ] IPG Server
      Tgt Stt: running(2),   Curr Stt: running(2),   Rest: 0,   Errs: 0

[ 3 ] Virtual Channel Server
      Tgt Stt: running(2),   Curr Stt: running(2),   Rest: 0,   Errs: 0

[ 4 ] PPV Processes (servers and messenger)
      Tgt Stt: running(2),   Curr Stt: running(2),   Rest: 0,   Errs: 0

[ 5 ] BFS
      Tgt Stt: stopped(1),   Curr Stt: stopped(1),   Rest: 0,   Errs: 0
-----
<Enter Number / X=Return To Menu / L=List Details / CR=Refresh>> █
  
```

- Does the word **running** appear next to the current state field (Curr Stt) of each process?
 - If **yes**, the SARA Server restarted automatically. As a result, there is no need to complete this procedure.
 - If **no**, click the middle mouse button and select **App Serv Start**. The SARA Server begins restarting all of its processes.
- On the Applications Control window, press **Enter** to update the working states of the SARA Server processes. Continue to press **Enter** every few seconds until all processes show Curr Stt: running(1).

Note: You will not see a status message while the processes are restarting.
- When the Application Control window indicates that the current state of each process is running, follow the on-screen instructions to close the Applications Control window.
- Note:** On some systems, the BFS process may remain at stopped. This is normal.
- Go to *Restarting cron Jobs* (on page 40).

Restarting cron Jobs

Complete the following steps to restart the cron jobs on the DNCS and SARA Server.

Note: The cron jobs may have restarted on their own when you restarted the DNCS and SARA Server processes, earlier in this chapter.

- If necessary, open an xterm window on the DNCS.
- Check if the cron jobs are already running. Type **ps -ef | grep cron** and press **Enter**. If cron jobs are already running, the system lists **/usr/sbin/cron**.

- 3 Are the cron jobs already running?
 - If **yes**, go to step 4.
 - If **no**, go to step 7.
- 4 Follow these instructions to log in to the xterm window as root user.
 - a Type **su -** and then press **Enter**. The password prompt appears.
 - b Type the root password and then press **Enter**.
- 5 Type **/etc/rc2.d/S75cron start** and then press **Enter**. The system restarts all cron jobs.
- 6 Confirm that the cron jobs have restarted by typing **ps -ef | grep cron** and then press **Enter**. The system should list **/usr/sbin/cron**.
- 7 Type **exit** and then press **Enter** to log out the root user.
- 8 Open an xterm window on the SARA server. A prompt appears.
- 9 Check if the cron jobs are already running. Type **ps -ef | grep cron** and then press **Enter**. If cron jobs are already running, the system should list **/usr/sbin/cron**. If **/usr/sbin/cron** is not listed, then cron jobs are not running.
- 10 Are the cron jobs already running?
 - If **yes**, go to step 15.
 - If **no**, go to step 11.
- 11 From a prompt on the SARA Server xterm window, type **su -** and press **Enter**. A password prompt appears.
- 12 Type the root user password and press **Enter**. A prompt for the root user appears.
- 13 Type **/etc/rc2.d/S75cron start** and then press **Enter**. The system restarts all cron jobs.
- 14 Confirm that the cron jobs have restarted by typing **ps -ef | grep cron** and then press **Enter**. The system should list **/usr/sbin/cron**.
- 15 Type **exit** and then press **Enter** to log out the root user.
- 16 If necessary, manually run the IPG collector.
- 17 Go to *Restarting Billing and Other Third-Party Applications* (on page 41).

Restarting Billing and Other Third-Party Applications

Contact your billing vendor to restart the billing interface. If you stopped any third-party interfaces, restart those interfaces as well.

What's Next?

The next action you take depends upon whether or not your system uses the Regional Control System (RCS) option.

- If your system uses the RCS option, go to *Restarting RNCS Processes* (on page 42).
- If your system does not use the RCS option, go to *Complete System Validation Tests* (on page 45).

Note: If you are unsure whether or not your system uses the RCS option, go to *Determining Whether RCS Is Enabled* (on page 22).

Restarting RNCS Processes

If you determined earlier that your system uses the RCS feature, use one of the following methods to restart Remote Network Control Server (RNCS) processes at each remote site in your RCS:

- Use the **siteCmd** command to restart RNCS processes at all sites in your system. Go to *Restarting RNCS Processes at All Sites* (on page 42).
- Use the **siteControl** command to restart RNCS processes at each site in your system, one site at a time. Go to *Restarting RNCS Processes at One Site* (on page 42).

Restarting RNCS Processes at All Sites

- 1 Open an xterm window on the DNCS, and log on as the dncs user.
- 2 To restart RNCS processes at all sites in your system, type **siteCmd -a lionnStart** and press **Enter**. When the system prompts you to verify that you want to “start the LIONN” (all RNCS processes at all sites).
- 3 Type **Y** (yes) and press **Enter** to confirm that you want to restart the processes on all sites in your system. The system informs you that it is starting LIONN Applications (processes on all sites in your system), and displays the command prompt for the DNCS user. If necessary, manually run the IPG collector, and then go to *Complete System Validation Tests* (on page 45).
- 4 To exit, type **x** and then press **Enter**.
- 5 If necessary, manually run the IPG collector.
- 6 Go to *Complete System Validation Tests* (on page 45).

Restarting RNCS Processes at One Site

- 1 Open an xterm window on the DNCS, and log on as the **dncs user**.
- 2 To restart RNCS processes at each site in your system, one at a time, type **siteControl (host name of the RNCS)** and press **Enter**. For example if "houston" is the name of the RNCS host, you would type **siteControl houston**. A menu opens, similar to the following example, that allows you to start the RNCS processes at this site.

```

siteControl: lionn-denver (from flame)
I
SNMP ExAgent V1.1 (c) 1997. Licensed Version.
-----
| Hostname: lionn-denver, UpTime: 78:03:47.00
| -> SysApp Agent: Main Menu
-----
[ 1 ] Startup / Shutdown All Element Groups
[ 2 ] Startup / Shutdown Single Element Group
-----
[ 3 ] Define / Update Element Group
[ 4 ] Define / Update Grouped Elements
[ 5 ] Update Agent Executive Parameter.
-----
[ L ] List Connection Parameters.
[ X ] Exit Menu Utility.
-----
Enter a menu option number, or 'X' to exit.
Enter Menu Option> █
  
```

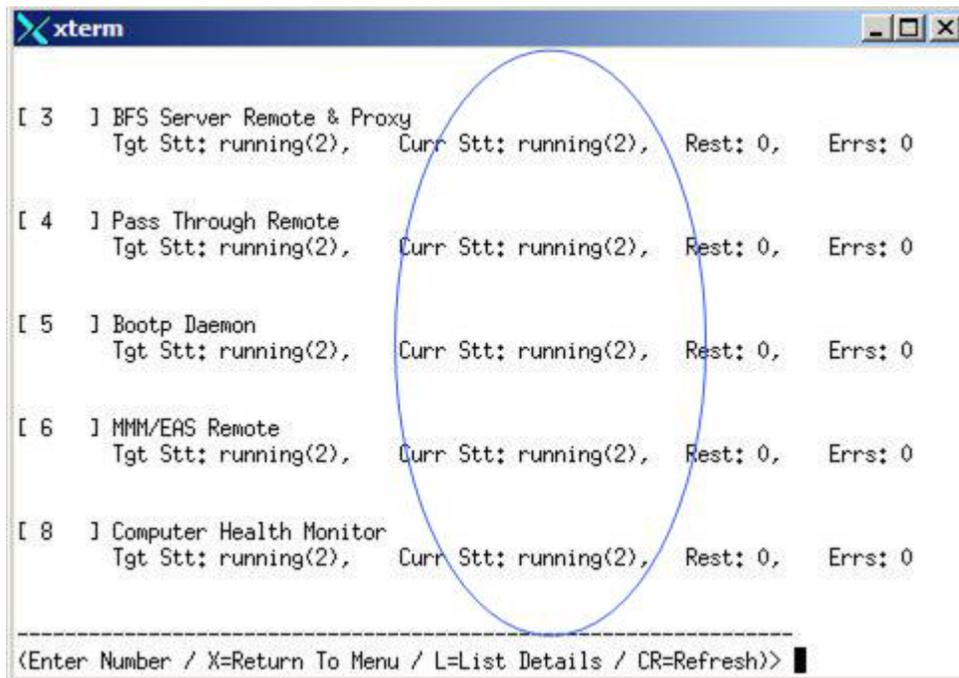
- 3 Type **1** to select **Startup/Shutdown All Element Groups** and press **Enter**. The system prompts you to select the target state for the system, similar to the following example.

```

[ X ] Exit Menu Utility.
-----
Enter a menu option number, or 'X' to exit.
Enter Menu Option> 1
Enter master target state for system, in the range 1-4.
Possible values are:
[ 1 ] stopped(1)
[ 2 ] running(2)
[ 3 ] paused(3)
[ 4 ] disabled(3)
Default value: running(2)
cpExecMasterTargetState-----?> █
  
```

- 4 Type **2** to select **Running**, and press **Enter**. A confirmation prompt appears.
- 5 Type **y** to select **yes**, and press **Enter**. The main menu displays.
- 6 Type **2** and press **Enter**. The system displays the status of each process.

- 7 When all processes show a status of “running,” similar to the following example, follow the on-screen instructions to exit the utility.



```
xterm
[ 3 ] BFS Server Remote & Proxy
      Tgt Stt: running(2),  Curr Stt: running(2),  Rest: 0,  Errs: 0
[ 4 ] Pass Through Remote
      Tgt Stt: running(2),  Curr Stt: running(2),  Rest: 0,  Errs: 0
[ 5 ] Bootp Daemon
      Tgt Stt: running(2),  Curr Stt: running(2),  Rest: 0,  Errs: 0
[ 6 ] MMM/EAS Remote
      Tgt Stt: running(2),  Curr Stt: running(2),  Rest: 0,  Errs: 0
[ 8 ] Computer Health Monitor
      Tgt Stt: running(2),  Curr Stt: running(2),  Rest: 0,  Errs: 0
-----
<Enter Number / X=Return To Menu / L=List Details / CR=Refresh>>
```

- 8 Have you restarted RNCS processes at all sites in your RCS?
- If **yes**, go to step 9.
 - If **no**, repeat steps 2 to 7 to restart the processes on another RNCS at another site in your system and then continue with step 9.
- 9 Did you determine earlier that you should manually run IPG collectors after upgrading to SARA Server software 3.4.1?
- If **yes**, manually run each IPG collector in your system and then go to *Complete System Validation Tests* (on page 45).
 - If **no**, go to *Complete System Validation Tests* (on page 45).

Complete System Validation Tests

Introduction

After you restart the cron jobs and the billing and other third-party applications, you must perform system validation tests.

Prerequisites

The test DHCT(s) you use for this procedure must meet the following conditions:

- Must be authorized for all third-party applications
- Must not be authorized to view a PPV event without specifically buying the PPV event
- Must have a working return path and be capable of booting into two-way mode

Verifying a Successful Installation

Complete the following steps to verify that SARA Server 3.4.1 installed successfully.

Important! If this procedure fails, do not continue with the remaining procedures in this publication. Instead, contact Cisco Services.

- 1 Perform a slow-and-fast boot on a test DHCT as follows:
 - a Boot a DHCT.
Note: Do not press the power button.
 - b Access the Power On Self Test and Boot Status Diagnostic Screen on the DHCT and verify that all parameters, except UNcfg, display **Ready**.
Note: UNcfg displays **Broadcast**.
 - c Wait 5 minutes.
 - d Press the power button on the DHCT to power on the DHCT.
 - e Access the Power On Self Test and Boot Status Diagnostic Screen on the DHCT.

- f Do all of the parameters, including UNcfg, display **Ready**?
 - If **yes**, go to step 2.
 - If **no**, contact Cisco Services.
- 2 Ping the DHCT.
- 3 Did the DHCT receive the ping?
 - If **yes**, go to step 4.
 - If **no**, contact Cisco Services.
- 4 Stage at least one new DHCT to the system operator's specifications.
- 5 Did the newly staged DHCT successfully load the current client release software?
 - If **yes**, go to step 6.
 - If **no**, contact Cisco Services.
- 6 Did the DHCT receive at least 33 EMMs and successfully receive its Entitlement Agent?
 - If **yes**, go to step 7.
 - If **no**, contact Cisco Services.
- 7 Does the IPG display 7 days of valid and accurate data?
 - If **yes**, go to step 8.
 - If **no**, contact Cisco Services.
- 8 Does the IPG support multiple languages?
 - If **yes**, go to step 9.
 - If **no**, contact Cisco Services.
- 9 Do the PPV barkers appear on the PPV channels correctly?
 - If **yes**, go to step 10.
 - If **no**, contact Cisco Services.
- 10 Do third-party applications load properly?
 - If **yes**, go to step 11.
 - If **no**, contact Cisco Services.

- 11 Did every test in this section pass?
 - If **yes**, go to step 12.
 - If **no**, contact Cisco Services.
- 12 Verify that your EAS equipment is working correctly by testing the system's ability to transmit EAS messages. Complete all of the procedures in the **Testing the EAS** section of *Configuring and Troubleshooting the Digital Emergency Alert System*. Then, verify that you can generate an EAS message for the Emergency Alert Controller (EAC), itself.
- 13 Were you able to generate an EAS message?
 - If **yes**, you have successfully installed SARA Server 3.4.1 on the SARA Server.
 - If **no**, contact Cisco Services.

4

Customer Information

If You Have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.

Access your company's extranet site to view or order additional technical publications. For accessing instructions, contact the representative who handles your account. Check your extranet site often as the information is updated frequently.

A

SARA Server 3.4.1 Rollback Procedure

Introduction

If you notice that your system is unstable after having installed SARA Server 3.4.1, contact Cisco Services. Cisco Services engineers may determine that you need to remove the SARA Server software and reinstall the previous version.

Follow the procedures in this appendix to restore your system to its condition before you installed SARA Server 3.4.1. This procedure is known as a rollback.

Important! Do not start this rollback procedure without first contacting Cisco Services.

Database Changes Are Not Rolled Back

This rollback procedure rolls back only the executable files. Any database changes are not rolled back. These database changes are permanent and will have no negative impact upon systems that are rolled back.

In This Appendix

- Roll Back SARA Server 3.4.1 50

Roll Back SARA Server 3.4.1

Introduction

In the unlikely event that you experience a problem installing this SARA Server, the rollback process involves reinstalling the previous versions of the *SAIapshr* and *SAItools* packages for the SARA Server.

Note: You identified these versions and set aside this CD in *Identify and Locate the Versions of SAIapshr and SAItools Currently Installed* (on page 13).

Rolling Back SARA Server 3.4.1

Complete these steps to roll your SARA Server software back to the previous release before you installed SARA Server 3.4.1.

Important! Do not start this rollback procedure without first contacting Cisco Services.

- 1 Locate the previous version installation CD that you identified in *Identify and Locate the Versions of SAIapshr and SAItools Currently Installed* (on page 13).

Note: If you were unable to locate this CD and instead made a backup of the SARA server version previously installed on your system, locate the backup tape that you made as instructed in *Identify and Locate the Versions of SAIapshr and SAItools Currently Installed* (on page 13).

- 2 Complete the procedures in the following sections of this publication:
 - a *Stopping System Components* (on page 21)
 - b *Stopping the cron Jobs on the SARA Server* (on page 27)
 - c *Stopping the cron Jobs on the DNCS* (on page 29)
 - d *Ensuring No Active Database Sessions on the DNCS* (on page 30)
- 3 Are you restoring from the previous installation CD?
 - If **yes**, go to step 4.
 - If **no**, refer to the backup and restore documents appropriate to your system for assistance restoring from a backup tape.
- 4 Open an xterm window on the SARA Server.
- 5 Type **su -** and press **Enter** to log in to the xterm window as **root** user. A password prompt appears.
- 6 Type the **root** user password. A prompt appears.
- 7 Type **pkgrm SAIapshr SAItools** and press **Enter**. The system prompts you to confirm that you want to remove the packages.

- 8 Type **Y** for yes then place the CD labeled similar to **SARA Server** into the CD drive of the SARA Server. The system automatically mounts the CD to `/cdrom` within 30 seconds.
Important! This is your previous version of SAlapsrv software.
- 9 Type **df -n** and then press **Enter** to display a list of the file systems that have mounted.
Note: The presence of `/cdrom` in the output confirms that the system correctly mounted the CD.
- 10 Type **cd /cdrom/cdrom0** and then press **Enter**. The `/cdrom/cdrom0` directory becomes the working directory.
- 11 Type **./install_pkg** and then press **Enter**. A message asks you to confirm that you want to proceed with the installation.
Important! Make certain that there are no spaces between the dot (.) And the slash (/).
- 12 Type **y** and press **Enter** to start the installation. The Installation Configuration screen opens and lists the installation configuration settings.
- 13 Do the settings listed match those of your installation environment?
 - If **yes**, go to step 15.
 - If **no**, go to step 14.
- 14 Follow these instructions to change one or more settings:
Important! The Install Configuration settings are case-sensitive. For this reason, make certain that the option you enter matches the option that is displayed. Otherwise, the system rejects your entry. For example, if the system lists “USA” as an option for `INSTALLED_IN_COUNTRY`, do not type `usa`.
 - a Type the number that corresponds to the setting you want to change, and press **Enter**. The system prompts you to select an option, and provides available options in parentheses. (The default setting is shown in brackets.)
Example: To change the setting for `INSTALLED_IN_COUNTRY`, type 6 and press Enter.
 - b Type the option appropriate to your installation, and press **Enter**. The Installation Configuration settings change to show the option you just entered.
Example: To change the `INSTALLED_IN_COUNTRY` setting from the default `[USA]` to Canada, type Canada and press Enter.
 - c Repeat steps a and b to change another setting. After all settings are correct, continue with step 15.

- 15 Type **c** to continue and press **Enter** to start the installation. When the installation is complete, the system displays a message stating that the installation was successful, lists the directory where the installation messages were stored, and displays a root user prompt.

Notes:

- The installation should take about 5 minutes.
 - The log file for the SARA Server software is in this directory on the SARA Server: `/var/sadm/system/logs`.
 - The log file for the SARA Server software is called `<rbck_app_svr_log_file_name>`.
- 16 Follow these instructions to eject the CD:
 - a Type **cd /** and then press **Enter**.
 - b Type **eject cdrom** and then press **Enter**.
 - 17 Remove the CD from the CD drive and store it in a secure location.
 - 18 Are the SAlapsrv and SAIttools packages on one CD?
 - If **yes**, go to step 19.
 - If **no**, place the second CD in the CD drive and repeat steps 9 to 17 to install these tools. When you are finished, continue with step 19.
 - 19 At the root user prompt on the SARA Server, type **/usr/sbin/shutdown -y -g0 -i0** and then press **Enter**. The SARA Server shuts down and an ok prompt appears.
 - 20 At the root user prompt on the DNCS, type **/usr/sbin/shutdown -y -g0 -i6** and then press **Enter**. The DNCS reboots and a login prompt appears.
 - 21 At the login prompt on the DNCS, log on as **dncs**.
 - 22 On the SARA Server, type **boot** at the ok prompt and press **Enter**.
 - 23 At the login prompt on the SARA Server, log on as **dncs**.
 - 24 Complete the procedures in *Restart System Components* (on page 37).
 - 25 Follow the steps in *Verify DBDS Stability* (on page 16) to ensure that the system is stable after the rollback.



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